Project Proposal



**Project By:**

1. Amjad Ahmed (023-18-0302)
2. Tanveer ul haq (023-18-0303)

**Course:** Web-Engineering

**Institute:** Sukkur IBA University

**Instructor:** Sir Nisar Ahmed siddiqui

E-Commerce System in ReactJS, NodeJS, Express & MySQL.

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# Abstract

Online Shopping is so common nowadays. Almost everyone does online shopping and buy different products from different online sources. As time has passed, people are moving towards a technological era. People wants things at their finger-tips and they are working on it. We are proposing a system that will be an online shopping system called E-Commerce System (ECS), in which we will provide a user-friendly interface along with a best experience. The system can be implemented via an online website, that will be accessible for everyone. The proposed system can give people so much ease. They can view products with each and every detail and pictures of products. So, the system will be implemented with a lot of features and will make ease for people.

# 2.0 Introduction & Background

Our era is now moving towards the technology. Everything is now connected with some technology as does the e-commerce. There are many of the systems that are available for online shopping, but they as the time is changing, they need some improvement too.

Therefore, our proposed system is for those improvements. We are proposing a system for e-commerce management. Our system will be considering major features to facilitate not only user, but also the admin or the managers of e-commerce system. Our system will provide a great user-friendly user interface for both user and admin side, so that they cannot deal with any trouble while using our system.

Our system will be based on two tiers. First tier is the frontend and other tier is the backend. In the frontend, we will be using the ReactJS majorly, which will make the system much efficient and faster. On the backend, we will be using the NodeJS and Express for making database as well as the APIs, that will be consumed in the system.

Proposed e-commerce system falls into two broad parts. One is the website part and other is the dashboard part. In the website there will be a login page, through which users can login. There will be a signup page in order to register the new user. Users can see their profile details. And they will see the different products of available in the store. Sale products are labeled with their discounted price and new arrivals are labeled with new tag for the feasibility of users. Users can add to card the selected products and can order easily and they can checkout and place order if they are registered users, otherwise they have to register first. On the admin side, admin will be managing the orders and users. Admin can change order status to pending, delivered, or cancelled etc. Moreover, he can add more products to the store with their details. Moreover, our system had backend with NodeJS and Express. So, the database and APIs will be developed with these.

# 3.0 Problem Statement

Physical shopping is now like a headache for people nowadays. They do not want to go the stores and waste their time and energy for buying different products. So, we are designing an online shopping system, that will ease people to buy products by sitting their home, office or anywhere.

# 4.0 Literature Review

In this section we have analyzed the designs and features of existing e-commerce to identify the limitations of such website.

Design and features of some existing E-commerce Website:

Some website design build on old technologies like HTML, CSS, JavaScript and PHP. And these websites are multi page websites. It loads all the context of page for minor change. Some existing websites have limited features like user can order any product. If he/she is logged in and just see order details and profile. Moreover, this is without admin dashboard.

This existing system built on old technologies and with limited features. However, our website is built on new technologies like react node express and mongo DB with enhance features and also with admin dashboard.

# 5.0 Project Technical Approach & Methodology

In this section we first develop admin dashboard with react.js. In dashboard we add functionality like Login then it moves to Dashboard home and here we manage customer order and products. Details of features of dashboard are given below:

Login: (only admin can log in, direct routing is disabled and can’t move to any route if not logged in)

Dashboard Home: (shows total sales current day, annually, pending orders, completed orders, also it has bar graph showing sales)

Orders: (we can see all orders details which are placed, customers who places orders, and can change status of order, we can also delete order)

Products (we can add, delete, update and see products, available categories and subcategories will be used with product, discount attribute is also present with product object, if discount >0, then it will automatically show as sale product)

Customers: (created when user register, also we can see total purchases, no of orders of any customer)

Categories (we can add and remove category and its subcategory)

Reports (We can print pdf of orders & can filter orders on different option like orderId, customerId, status, etc.)

These are the key features which we include in our admin dashboard

Next phase of our website is creating front end design using react.js according to admin dashboard in that we add features like User can Login and sign up, User can see his/her account details, User can see all his/her order records ,Cart is maintainable with and without user logged in, Cart Details shown to User where he/she can see detailed receipts of order, User can checkout from cart by signing into his/her account and fulfilling details of order, products sale, new and can filter according to category, subcategory. After completion of dashboard and front end of our website then for data manipulate, we create rest APIs with the help of node.js and express and for data storing purpose we use MongoDB.

# 6.0 Expected Output of the Project (Final Product)

The final output of the project will be a professional and full-functional e-commerce website. The project will include almost all features that an e-commerce system should have.